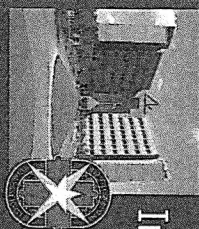
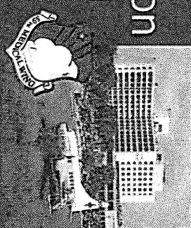


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Improvement in Knowledge and Confidence after the Introduction of a New Curriculum for Rotating Residents in the Medical ICU

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PURPOSE

To develop a sustainable curriculum for residents rotating through the medical intensive care unit that addresses critical care topics

BACKGROUND

- Gaps exist in internal medicine residents' critical care knowledge and skills
- Learning environment on critical care rotation
- No specific or standardized didactics
- Relied on bedside teaching from staff fellows
- Variable resident experience

- Conducted needs assessment from rotating residents
- Dissemination from residents in a CME survey
- Request for additional simulation experience
- Challenges to a standardized MICU curriculum:
 - Work hours, handoffs, time constraints, low patient census, protected educational time, lectures
 - Variable resident schedule
- Goals for standardized MICU curriculum:
 - Practical topics for critical care
 - Flipped classroom model^{1,2}
 - High-fidelity simulation session

METHODS

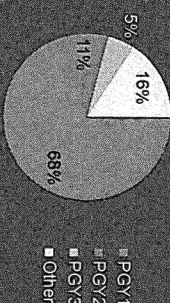
- Development of new curriculum
- Based on four-week rotation
- Mandatory orientation once weekly for new residents that includes pre-survey and pretest
- Three one-hour mandatory lectures per week. Six mandatory interprofessional simulation exercises

DISCLAIMERS

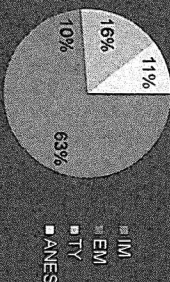
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RESULTS

Year of Training



Specialty

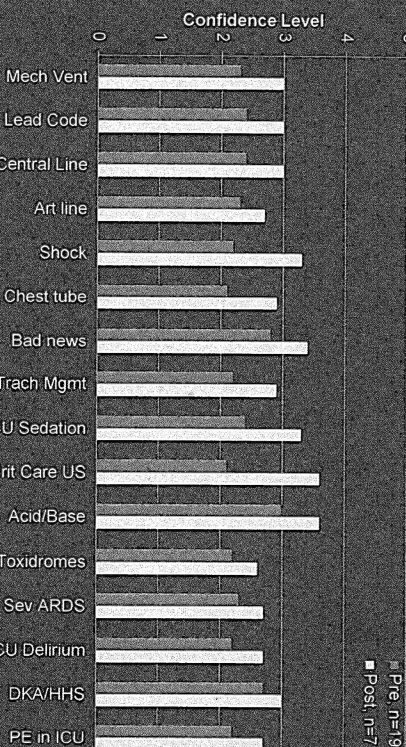


Prior critical care experience, n=19

	Median (Range)
Number of prior weeks on critical care service in residency	0 weeks (0-10)
Central lines placed	1 line (0-15)
Arterial lines placed	0 lines (1-15)
Code leader	0 lead roles (0-2)
Intubations performed	3 intubations (0-50)
Mechanically Ventilated Patients	5 MV patients (0-20)

Simulation Survey Topic, n=70

	Strongly Agree
Medical knowledge in care of patients	80%
Optimized learning objectives	90%
Valued as a team member	90%
Addressed team communication	90%
Increased level of roles & responsibilities	90%
Defining enhanced my knowledge	90%



RESULTS & DISCUSSION

- Resident demographics
- Primarily interns with little critical care experience
- 63% of the residents are internal medicine

Postrotation surveys

- Improved confidence in all topics
- Statistically significant improvement in majority
- Critical care ultrasound (2.1 to 3.6, +71%, p<0.001)
- Shock (2.2 to 3.3, +50%, p<0.001)
- Chest tube (2.1 to 3.3, +38%, p=0.03)
- ICU Sedation (2.4 to 3.3, +38%, p=0.005)
- Benefits of lecture style and hands-on training
- Majority of learners strongly agree about the value of the simulation sessions

Knowledge assessment results

- Pretest average score = 48% (12 of 25 questions), n=25
- Posttest average score = 58% (14 of 25 questions), n=7
- Further data collection needed for additional analysis

CONCLUSION

The implementation of a standardized curriculum for residents rotating through the MICU demonstrates improvements in confidence level and knowledge base of critical care medicine

FUTURE DIRECTION

- Expansion of simulation sessions to include assessment portion that is linked to ACGME milestones
- Further refinement of lecture content and skills sessions based on resident feedback and deployment address
- Expansion of critical care ultrasound curriculum

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